

This listing of claims will replace all prior versions, and listings, of claims in the application:

**LISTING OF CLAIMS:**

Claim 1 (Canceled)

Claim 2 (Currently Amended): The automatic flowcharting method according to Claim [[1]] 12, said method further comprising the step of:

associating a first visual attribute to said processing operations in said first selected group and a second visual attribute to said processing operations in said second selected group.

Claim 3 (Original): The automatic flowcharting method according to Claim 2, wherein said first visual attribute is a first color.

Claim 4 (Previously Presented): The automatic flowcharting method according to Claim 2, wherein said second visual attribute is a second color.

Claim 5 (Currently Amended): The automatic flowcharting method according to Claim [[1]] 12, said analyzing step further comprising:

identifying a third group of processing operations that repeatedly appear in said data structure.

Claim 6 (Original): The automatic flowcharting method according to Claim 5, said analyzing step further comprising:

associating a third visual attribute to said processing operations in said third group.

Claim 7 (Original): The automatic flowcharting method according to Claim 6, wherein said third visual attribute is a third color.

Claim 8 (Canceled)

**BEST AVAILABLE COPY**

Claim 9 (Currently Amended): The automatic flowcharting method according to Claim [[8]] 12, said method further comprising a step of:

automatically exporting said processing operations and said decision operations for said multi-nodal process from a database into said input file.

Claim 10 - 11 (Canceled)

Claim 12 (Currently Amended): The An automatic flowcharting method for diagrammatically representing a multi-nodal process comprising processing operations and decision operations, said method comprising:

(a) reading an input file including data representing a multi-nodal process arranged as a plurality of records, each of said plurality of records including a first processing operation, a second processing operation and a decision operation;

(b) converting processing operations and decision operations of said multi-nodal process from said input file into a data structure;

(c) analyzing said data structure for identifying a first group of processing operations that appear once in said data structure, and for identifying a second group of processing operations that are associated with two or more decision operations in said data structure;

(d) traversing said data structure to generate an ordered sequence of processing operations for visual representation; and

(e) generating a diagrammatic representation of said ordered sequence including orienting successive processing operations in a vertical dimension and associating attributes to each processing operation of said processing operations according to their identified group while offsetting each successive processing operation in a horizontal dimension according to Claim 1; wherein said each successive processing operation is offset in said horizontal dimension relative to an immediate prior processing operation, and linking each processing operation of said second group to a further processing step of said processing operations according to a decision operation of said two or more decision operations,

wherein the linking of each processing operation of said second group includes aligning said processing operation to a further processing step in said vertical dimension.

Claim 13 (Currently Amended): The automatic flowcharting method according to Claim ~~[[1]]~~ 12, said method further comprising a step of:

writing an output file for said generated diagrammatic representation of said multi-nodal process.

Claim 14 (Original): The automatic flowcharting method according to Claim 13, wherein said output file is written in a markup language for presentation in a web-enabled browser.

Claim 15 (Original): The automatic flowcharting method according to Claim 14 wherein said output file is transmitted over a communications network.

Claim 16 (Original): The automatic flowcharting method according to Claim 15 wherein said communications network is one selected from the group comprising:

an Intranet, and  
the Internet.

Claim 17 (Canceled)

Claim 18 (Currently Amended): The automatic flowcharting system according to Claim ~~17~~ 28, said server further including:

a mechanism for associating a first visual attribute of said processing operations in said first group and a second visual attribute to said processing operations in said second group.

Claim 19 (Original): The automatic flowcharting system according to Claim 18, wherein said first visual attribute is a first color.

Claim 20 (Original): The automatic flowcharting system according to Claim 18, wherein said second visual attribute is a second color.

Claim 21 (Currently Amended): The automatic flowcharting system according to Claim 17 28, said mechanism for analyzing further comprising:

a mechanism for identifying a third group of processing operations that repeatedly appear in said data structure.

Claim 22 (Original): The automatic flowcharting system according to Claim 21, said mechanism for analyzing further comprising:

a mechanism for associating a third visual attribute to said third group of processing operations.

Claim 23(Original): The automatic flowcharting system according to Claim 22, wherein said third visual attribute is a third color.

Claim 24 (Canceled)

Claim 25 (Currently Amended): The automatic flowcharting system according to Claim 24 28, said server further including:

a mechanism for automatically exporting said processing operations and said decision operations for said multi-nodal process from a database into said input file.

Claim 26 – 27 (Canceled).

Claim 28 (Currently Amended): The An automatic flowcharting system for diagrammatically representing a multi-nodal process comprising processing operations and decision operations in a client-server environment, said system comprising:

(a) a server interconnected via a communications network to a client, said server including:

(i) a mechanism for reading an input file including data representing a multi-nodal process arranged as a plurality of records, each of said plurality of records including a first processing operation, a second processing operation and a decision operation;

(ii) a mechanism for converting processing operations and decision operations of said multi-nodal process into a data structure;

(iii) a mechanism for analyzing said data structure for identifying a first group of processing operations that appear once in said data structure, and for identifying a second group of processing operations that are associated with two or more decision operations in said data structure; and

(iv) a mechanism for traversing said data structure to generate an ordered sequence of processing operations for visual representation;

(v) a mechanism for generating a diagrammatic representation of said ordered sequence including orienting said processing operations in a vertical dimension and associating attributes to each processing operation of said processing operations according to their identified group, said generating mechanism including according to Claim 17, ~~said mechanism for generating~~ further comprising: a mechanism for determining a horizontal indentation for each successive processing operation of said processing operations such that each successive processing operation is offset in a horizontal dimension relative to an immediate prior processing operation, and such that each processing operation of said second group is linked in vertical alignment with a further processing step of said processing operations according to a decision operation of said two or more decision operations; and

(b) said client for receiving said generated diagrammatic representation of said multi-nodal process via said communications network in a form for presentation by said client.

Claim 29 (Currently Amended): The automatic flowcharting system according to Claim 17 28, said server further including:

a mechanism for writing an output file of said generated diagrammatic representation of said multi-nodal process.

Claim 30 (Original): The automatic flowcharting system according to Claim 28, wherein said output file is written in a markup language for presentation in a web-enabled browser by said client.

Claim 31 (Original): The automatic flowcharting system according to Claim 30, wherein said output file is transmitted over said communications network.

Claim 32 (Original): The automatic flowcharting method according to Claim 31, wherein said communications network is one selected from the group comprising:

an Intranet, and  
the Internet.

Claim 33 (canceled)

Claim 34 (Currently Amended): The program storage device according to Claim ~~33~~ 44, said method further comprising the step of:

associating a first visual attribute to said processing operations in said first group and a second visual attribute to said processing operations in said second group.

Claim 35 (Original): The program storage device according to Claim 34, wherein said first visual attribute is a first color.

Claim 36 (Original): The program storage device according to Claim 34, wherein said second visual attribute is a second color.

Claim 37 (Currently Amended): The program storage device according to Claim ~~33~~ 44, said analyzing step further comprising:

identifying a third group of processing operations that repeatedly appear in said data structure.

Claim 38 (Currently Amended): The program storage device according to Claim 37, said analyzing step further comprising:

associating a third visual attribute to said third group of processing operations.

Claim 39 (Original): The program storage device according to Claim 38, wherein said third

visual attribute is a third color

Claim 40 (canceled)

Claim 41 (Currently Amended): The program storage device according to Claim 40 ~~44~~, said method further comprising a step of:

automatically exporting said processing operations and said decision operations for said multi-nodal process from a database into said input file.

Claim 42 – 43 (Canceled)

Claim 44 (Currently Amended): The A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform an automatic flowcharting method for diagrammatically representing a multi-nodal process comprising processing operations and decision operations, said method comprising:

(a) reading an input file including data representing a multi-nodal process arranged as a plurality of records, each of said plurality of records including a first processing operation, a second processing operation and a decision operation;

(b) converting processing operations and decision operations of said multi-nodal process from said input file into a data structure;

(c) analyzing said data structure for identifying a first group of processing operations that appear once in said data structure, and for identifying a second group of processing operations that are associated with two or more decision operations in said data structure;

(d) traversing said data structure to generate an ordered sequence of processing operations for visual representation; and

(e) generating a diagrammatic representation of said ordered sequence including orienting successive processing operations in a vertical dimension and associating attributes to each processing operation of said processing operations according to their identified group while offsetting each successive processing operation in a horizontal dimension according to Claim 33; ~~wherein said each successive processing operation is offset in said horizontal dimension relative~~

to an immediate prior processing operation, and linking each processing operation of said second group to a further processing step of said processing operations according to a decision operation of said two or more decision operations,

wherein the linking of each processing operation of said second group includes aligning said processing operation to a further processing step in said vertical dimension.

Claim 45 (Currently Amended): The program storage device according to Claim 33 ~~44~~, said method further comprising a step of:

writing an output file of said generated diagrammatic representation of said multi-nodal process.

Claim 46 (Original): The program storage device according to Claim 45, wherein said output file is written in a markup language for presentation in a web-enabled browser.

Claim 47 (Original): The program storage device according to Claim 46, wherein said output file is transmitted over a communications network.

Claim 48 (Original): The program storage device according to Claim 47, wherein said communications network is one selected from the group comprising:

an Intranet, and  
the Internet.



**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☒ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**